Seminar

Institute for Plasma Research

Title : Global Gyrokinetic Simulations of Intrinsic Torque Reversal and Kelvin-Helmoltz Instability with the GTS Particle-in-Cell Code

Speaker : Dr. Stephane Ethier
Deputy Head, Computational Plasma Physics Group, Princeton Plasma Physics Laboratory

Date : 15th December 2014, Monday

Time : 11.00 AM

Venue : Seminar Hall, IPR

Abstract:

The Gyrokinetic Tokamak Simulation code GTS is PPPL's flagship code for the study of core transport in experimental devices, such as NSTX, Alcator C-MOD, DIIID, etc. This talk will introduce GTS and its distinctive features, followed by the results of two recent studies presented at the APS-DPP meeting last October. The first study shows how magnetic shear effects can induce intrinsic torque reversal in tokamaks while the second discusses how drift wave Kelvin-Helmolz instabilities can be driven by toroidal shear flow in an NSTX L-mode discharge.